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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,747	12/08/2003	Robert M. Koehl	085455-9455-00	2653
23409 7590 07/11/2008 MICHAEL BEST & FRIEDRICH LLP 100 E WISCONSIN AVENUE Suite 3300 MILWAUKEE, WI 53202			EXAMINER DWIVEDI, VIKANSHA S	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 07/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,747	<b>Applicant(s)</b> KOEHL, ROBERT M.	
	<b>Examiner</b> VIKANSHA S. DWIVEDI	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 28-31 and 87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-31 and 87 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-31 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markuson et al. (U.S. Patent number 4,767,280) in view of Struthers (U.S. Patent number 6,481,973) McDonough (U.S. Patent number 6,227,808).

Markuson et al. discloses a control system for pumps for controlling various system parameters and automatically controlling the pumping unit (Column 3, lines 33-37). It discloses an electric motor (2), a microprocessor (4) and a controller (10), figure 1 shows the components of the control system. The microprocessor (4) utilizes a digital input to calculate limp mode/underload conditions of the system (Column 4, lines 23-26). The controller (10) can control the motor (2) upon detection of various predetermined conditions. The motor can be slowed down, shut down or restarted as needed (Column 6, lines 59-63). Figure 2 is an illustration of operating conditions being monitored by the controller. It shows the limp mode/underload (18, near 30) conditions with respect to the normal run as shown in Figure 2. Figure 2 also shows that the motor is turned off after running in limp mode/underload situation (See circa element number 30). Thus providing the teaching for finally shutting down the motor following limp mode. Markuson et al. does not disclose the reduction of the operating frequency of the motor

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nor the specific use of current and limp current limit setting—although he does teach measuring the power to the motor and thus a limp power limit setting as opposed to a specific limp current limit setting. As is consistent with the applicant's specification, the terms "limp mode" and "limp current limit" are interpreted to be a state of pump motor operation at reduced power or speed (reduced voltage and current to the motor), and the limit at which this state occurs, respectively. As is, if the sensed current, temperature, or voltage exceeds a predetermined limit value, (which constitutes a limp current, voltage, or temperature limit), the control circuit reduces speed of the motor by reducing power. The product of current and voltage equals power, it is obvious that the speed is reduced by reducing the power to the motor, i.e. reducing voltage or current.

Struthers specifically teaches the control of the frequency (Column 5, lines 9-30) and using the current as the parameter to control the motor. It would have been obvious to use operating frequency as one of the controlling parameter as it is easy to calculate and monitor and is accurate. It would have been obvious to one of ordinary skill in the art to employ the current and a limp current limit setting as a well known component of limp power, in order to control the motor using a known equivalent in the art. Struthers in view of Markuson et al. does not teach a pump for use within a pool and a spa.

McDonough teaches a a pump for use within a pool and a spa (Col. 2 ll. 39-51). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method for operating motor of a pump as disclosed by Struthers in view of Markuson et al. in view of McDonough to control and detect conditions in the pool or a spa (Summary of invention).

***Response to Arguments***

Applicant's arguments with respect to claims 28-31 and 87 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIKANSHA S. DWIVEDI whose telephone number is (571)272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746

VSD